

January 9, 2001: US EPA, through Federal Register, (Attachment) publishes 17 Ecoregional Nutrient Criteria documents for lakes/reservoirs, rivers/streams and wetlands. Criteria are published pursuant to Section 304(a) of the Clean Water Act (CWA) to provide guidance for states to use in adopting water quality standards. These criteria included Total Nitrogen, Total Phosphorus, Chlorophyll a and Secchi depth criteria aimed at reducing and preventing eutrophication on a National scale. The Federal Register notice specifically outlines that states are “expected to adopt or revise EPA ecoregional nutrient criteria ... into State ... water quality standards by 2004.” The notice includes options for states to adopt 304(a) published criteria, develop alternative standards or plans to control *nutrients* by the end of 2001. Ultimately, these options would result in states establishing nutrient standards by the end of 2004. Those standards must meet the requirements of the CWA, including approval by the US EPA. If states had not met this obligation by the end of 2001, EPA proposed to promulgate protective nutrient criteria (Total Nitrogen, Total Phosphorus, Chlorophyll a, Secchi depth) in those states/tribes.

January 2001: DWQ staff began meetings to determine the applicability and utility of the federal ecoregional documents. Staff immediately questioned the science of the derived recommended concentrations for chlorophyll a, phosphorus and nitrogen. (Example: Chlorophyll a criteria was proposed at 4.93 ug/l for the Southeastern Temperate Forested Plains region –i.e. Falls/Jordan Lakes) http://www.epa.gov/waterscience/criteria/nutrient/ecoregions/lakes/lakes_9.pdf

November 14, 2001: Recognizing problems associated with short compliance timelines, US EPA issues guidance to accomplish the federal requirements. Known as the “Grubbs” memo (“Development and Adoption of Nutrient Criteria into Water Quality”; Geoffrey Grubbs, Director, Office of Science and Technology; Attached), the guidance clarified the requirements for states to derive an EPA “mutually agreed upon” “plan of action” by 2004 with the intended purpose to reduce nutrients. The guidance noted that if a state had developed a plan of action or initiated its administrative process to adopt nutrient criteria by the end of 2004, EPA would conclude that a federal promulgation was *not* appropriate.

2002 to June 2004: Under CWA requirements to review and maintain protective standards, staff held numerous internal meetings, attended meetings with US EPA staff and sister states (Region IV and National) to propose an alternative plan for nutrient control in NC. After multiple revisions were drafted with reviews by EPA Headquarters Office of Science and Technology Nutrient Criteria Team and Region IV staff, NC DWQ submitted its final draft plan.

June 1, 2004: North Carolina Nutrient Criteria Implementation Plan (NCIP)(signed by Coleen Sullins on behalf of Alan Klimek) was submitted to Andrew Bartlett, US EPA, East Standards, Monitoring and TMDL Section for approval in accordance with Federal Register requirements of Jan 2001 (NCIP 6/1/04: Attached). This submittal included anticipated timelines for development of nutrient related actions, an overview of the State’s nutrient management strategies (Standards, NSW classifications, etc.) and a data inventory summary for NC lakes and reservoirs (Attached).

September 20, 2004: State received letter from US EPA providing “mutual agreement” of NCIP (signed by James Giattina, Director, Water Management Division, EPA Region IV; attached). In addition to providing a mutual agreement status, the letter contained a number of other recommendations for consideration. As required under CWA delegated authority, the correspondence noted that any changes to water quality standards resulting from the proposed plan *must be evaluated under the State’s Triennial Review* process for standards development.

October 12, 2005: *WQC-EMC Information Item* – Staff presented a very brief overview of Triennial Review actions pursuant to CWA requirements. Investigations, evaluations and conclusions toward any proposed changes to state nutrient related regulations were not scheduled, per the timelines in the approved NCIP, for completion until December 2007, thus the WQC was not presented any proposed actions or changes to water quality standards with respect to nutrients. The Commission was presented that these potential changes were being evaluated as a part of the “plan”. (Presentation was originally scheduled for September 8, 2005, delayed due to Hurricane Katrina).

October 25, 2005: Recognizing the staffing needs to complete NC General Assembly Session Law 2005-190 mandates relating to protection of drinking water supply reservoirs (ex: Falls Lake) and for Jordan Lake nutrient management proposals, DWQ (Alan Klimek, Director -Attached) submitted a request to US EPA Region IV staff for re-mutual agreement of the plan in order to extend the proposed milestone timelines. This request was made in accordance with the “Grubbs” memo and timelines were adjusted to meet both the needs of SL 2005-190 and the Federal Register 2001 actions.

January 2006: *WQC-EMC Triennial Review presentation (Action item)*. Staff presented a report on standards proposed for revision and included additional discussion on standards under review, but not proposed for action. Standards discussed, *but not presented for revision* included freshwater bacterial indicators and chlorophyll a. This PowerPoint presentation included discussions of the NCIP, its timeline status and the push by EPA for standards to be established to achieve control of nutrient inputs to the State’s waters. *No action* was requested of the Commission with respect to any changes to nutrient related standards (chlorophyll a).

March 9, 2006: *EMC Triennial Review presentation (Action item – request to proceed to public hearing)*. The EMC approved staff to take out for Public Notice revisions as recommended by the WQC in January 2006. It does not appear, from the public records, that EMC members requested any additional information with respect to nutrients. The presentation, and request to proceed, centered only on those actions approved for modification by the WQC.

July 3, 2006: State receives “re-mutual agreement” correspondence (Signed by Gail Mitchell for James Giattina, Director, Water Management Division, dated June 27, 2006). Receipt of “re-mutual agreement” did not constitute a US EPA approved change to water quality standards. Changes resulting from the state’s Triennial Review process were expected to be submitted to EPA under CWA obligations.

May 25, 2007: Benjamin Grumbles, Assistant Administrator , US EPA issues a “Memorandum on Nutrients”, the “Grumbles” memo (Attached), which further encouraged states to “accelerate” adoption of Nitrogen, Phosphorus (as causal variables), chlorophyll a and transparency (as response variables)

into states' water quality standards. This memo also contained a gross mischaracterization of NC's nutrient control regulations. DWQ responded to the Grumbles memo by submitting a letter (Coleen Sullins, Director, June 18, 2007- Attached) to the EPA correcting the misstatements and presenting a precise representation of programs and proactive regulations approved by the Environmental Management Commission.

November 12, 2008: *WQC-EMC information item*. In accordance with the NCIP timelines to begin the more formalized stakeholder process, staff presented to the WQC an information item on the state-wide approach to address nutrients, the NCIP, planned rule revisions and proposed rules for technology based nitrogen and phosphorus controls.

January 2009 to present: Staff has presented to stakeholder groups the proposed revisions to the water quality standards, including topics under review but not planned for revisions during this timeframe. (Examples: ammonia, bacteria, mercury fish tissue criteria, nutrients) Note that prior to these efforts, staff has presented NCIP information to Falls Lake and High Rock Lake stakeholders and other interested parties.

September 10, 2009: *EMC Information item*; DWQ Planning, Point Source Branch and Environmental Sciences staff provided information on: (1) proposals to change water quality standards for metals and chlorophyll a under CWA authority, (2) overview of the proactive nutrient management approach which included chlorophyll a thresholds action levels derived from the NCIP, (3) water bodies, identified through the NCIP investigations, that would likely be affected by any proposed changes to water quality standards or to regulations pertaining to point and non-point source control. It is important to recognize that the proposed thresholds and proactive strategies are not water quality standards and are not subject to EPA approval. They are, however, a result of our mutual agreement with the US EPA for actions to be undertaken to achieve stronger controls on nutrients as directed by the January 2001 Federal Register notice. The review of the chlorophyll a standards were required under CWA Triennial Review and these standards were also reviewed under NCIP mutual agreement.

November 5, 2009: DWQ submitted a request to US EPA Region IV staff to further extend NCIP timelines for adopting revised chlorophyll a standards and the establishment of chlorophyll a threshold rules and associated management strategies. (Chuck Wakild; Deputy Director, for Coleen Sullins - Attached). These revisions to the timelines provide additional time for the administrative rule making process. Approval of this timeline modification is pending.

November 18, 2009: *WQC-EMC Action Item*. Planning staff presented proposed changes to the chlorophyll a water quality standards (15A NCAC 2B .0200) in conjunction with proposed chlorophyll a threshold rules (15A NCAC 2B.0600). WQC members requested that additional stakeholder meetings occur on the proposed chlorophyll a threshold regulations.

January 13, 2010: *WQC-EMC Action Item*. Planning staff requested permission to proceed with changes to water quality standards (15A NCAC 2B .0200, which included the chlorophyll a standards). Approval was granted to proceed to the full Environment Management Commission in March 2010. (Note: This item did not include requests for action on 15A NCAC 2B .0600 – the chlorophyll a threshold rules)